

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A power system that comprises fuel cells and a fuel gas generation system for generating a hydrogen-rich fuel gas to be supplied to the fuel cells, and outputs electric power,
 - the fuel gas generation system comprising:
 - a chemical reaction module that generates a hydrogen-containing gaseous mixture from a predetermined material through a chemical process; and
 - a hydrogen separation module that separates hydrogen from the gaseous mixture,
 - the power system further comprising:
 - a hydrogen supply line that supplies the separated hydrogen to the fuel cells;
 - a stop signal input module that receives a stop signal for stopping the supply of hydrogen to the fuel cells;
 - a purge gas supply module that supplies specified purge gas for removal of hydrogen from the hydrogen separation module; and
 - a stop control module that selects a hydrogen purge mode that activates and controls the purge gas supply module to remove hydrogen from the hydrogen separation module or a hydrogen no-purge mode that stops the purge gas supply module as a stop control mode, and executes stop control in the stop control mode to stop the supply of hydrogen to the fuel cells.
2. (Original) The power system in accordance with claim 1, the power system further comprising:

a parameter input module that inputs a predetermined parameter representing a working state of at least one of the power system and a system with the power system mounted thereon,

wherein the stop control module selects either of the hydrogen purge mode and the hydrogen no-purge mode as the stop control mode, based on the input parameter, and executes the stop control in the selected stop control mode.

3. (Original) The power system in accordance with claim 1, wherein the stop control module changes over the stop control mode to the hydrogen purge mode, after execution of the stop control in the hydrogen no-purge mode.

4. (Original) The power system in accordance with claim 3, the power system further comprising:

a parameter input module that inputs a predetermined parameter representing a working state of at least one of the power system and a system with the power system mounted thereon,

wherein the stop control module switches over the stop control mode from the hydrogen no-purge mode to the hydrogen purge mode, when the input parameter fulfils a preset condition.

5. (Original) The power system in accordance with claim 4, the power system further comprising:

a temperature measurement module that measures temperature at a preset position in the power system,

wherein the predetermined parameter includes a parameter representing the observed temperature, and

the stop control module switches over the stop control mode from the hydrogen no-purge mode to the hydrogen purge mode, when the observed temperature is not higher than a preset level.

6. (Original) The power system in accordance with claim 2, the power system further comprising:

a temperature measurement module that measures temperature at a preset position in the power system,

wherein the predetermined parameter includes a parameter representing the observed temperature, and

the stop control module switches over the stop control mode from the hydrogen no-purge mode to the hydrogen purge mode, when the observed temperature is not higher than a preset level.

7. (Original) The power system in accordance with claim 1, the power system further comprising:

a booster mechanism that boosts up a pressure of hydrogen in the hydrogen supply line,

wherein the stop control module controls the booster mechanism to boost up the pressure of hydrogen in the hydrogen supply line, in the setting of the hydrogen no-purge mode to the stop control mode.

8. (Original) The power system in accordance with claim 1, the power system further comprising:

a temperature retention module that keeps temperature in the hydrogen separation module,

wherein the stop control module controls the temperature retention module to keep the temperature in the hydrogen separation module, in the setting of the hydrogen no-purge mode to the stop control mode.

9. (Original) The power system in accordance with claim 8, wherein the stop control module stops the operation of the temperature retention module, when the stop control in the hydrogen no-purge mode continues for at least a preset time period.

10. (Previously Presented) The power system in accordance with claim 3, wherein the stop control module actuates the purge gas supply module on the condition that hydrogen remains in the hydrogen separation module at a specific value.

11. (Previously Presented) The power system in accordance with claim 3, wherein the stop control module stops the operation of the purge gas supply module after elapse of a predetermined time period since a start of actuation of the purge gas supply module.

12. (Previously Presented) The power system in accordance with claim 1, the power system further comprising:

a restart request input module that receives a restart request to restart the fuel gas generation system, the restart request including an output demand to the fuel cells; and

a material supply control module that regulates a supply of the material to the chemical reaction module, in response to the output demand,

the material supply control module supplying a greater amount of the material to the chemical reaction module in response to input of the restart request into the restart request input module after a start of the stop control in the hydrogen purge mode, than would be supplied if stop control of the hydrogen purge mode had not started.

13. (Previously Presented) The power system in accordance with claim 12, wherein the material supply control module supplies the greater amount of the material to the chemical reaction module only when the output demand is not greater than a preset level after

a start of the stop control in the hydrogen purge mode, than would be supplied if stop control of the hydrogen purge mode had not started.

14. (Original) The power system in accordance with claim 1, the power system further comprising:

a secondary battery; and

a power supply control module that controls supply of electric power from the secondary battery according to a state of the stop control of the fuel cells.

15. (Original) The power system in accordance with claim 14, the power system further comprising:

an output demand input module that receives an output demand to the power system,

wherein in response to the output demand of not greater than a preset level, the power control module controls the secondary battery to output electric power and the stop control module executes the stop control in the hydrogen no-purge mode.

16. (Original) The power system in accordance with claim 14, the power system comprising:

a state-of-charge measurement module that measures a state of charge of the secondary battery,

wherein the stop control module executes the stop control in the hydrogen purge mode, when the observed state of charge is not higher than a preset level.

17. (Original) A mobile object having a motor as a driving source, the mobile object comprising the power system in accordance with claim 2 as a power source of the motor.

18. (Original) The mobile object in accordance with claim 17, wherein the predetermined parameter includes a parameter representing an on-off state of a starter switch of the motor, and

the stop control module executes the stop control in the hydrogen purge mode when the starter switch is off.

19. (Original) A mobile object having a motor as a driving source, the mobile object comprising the power system in accordance with claim 1 as a power source of the motor.

20. (Previously Presented) The mobile object in accordance with claim 19, the mobile object further comprising:

an operation state input module that inputs an operation state of a manipulation unit for moving the mobile object; and

a restart control module that restarts the fuel gas generation system when the input operation state allows for movement of the mobile object.

21. (Previously Presented) The mobile object in accordance with claim 19, the mobile object further comprising:

a moving speed measurement module that measures a moving speed of the mobile object; and

a restart control module that restarts the fuel gas generation system when the observed moving speed exceeds a preset level.

22. (Original) The mobile object in accordance with claim 21, the power system further comprising:

a restart request input module that receives a restart request to restart the fuel gas generation system, where the restart request includes an output demand to the fuel cells,

the mobile object further comprising:

a temperature measurement module that measures temperature at a preset position in the fuel gas generation system,

wherein the stop control module warms up the fuel gas generation system in response to input of the restart request into the restart request input module, when the observed temperature is not higher than a preset lower limit, in the setting of the hydrogen purge mode to the stop control mode.

23. (Original) The mobile object in accordance with claim 20, the power system further comprising:

a restart request input module that receives a restart request to restart the fuel gas generation system, where the restart request includes an output demand to the fuel cells,

the mobile object further comprising:

a temperature measurement module that measures temperature at a preset position in the fuel gas generation system,

wherein the stop control module warms up the fuel gas generation system in response to input of the restart request into the restart request input module, when the observed temperature is not higher than a preset lower limit, in the setting of the hydrogen purge mode to the stop control mode.

24. (Original) A mobile object having a motor as a driving source, the mobile object comprising the power system in accordance claim 3 as a power source of the motor.

25. (Original) A mobile object having a motor as a driving source, the mobile object comprising the power system in accordance claim 7 as a power source of the motor.

26. (Original) A mobile object having a motor as a driving source, the mobile object comprising the power system in accordance claim 8 as a power source of the motor.

27. (Original) A mobile object having a motor as a driving source, the mobile object comprising the power system in accordance claim 10 as a power source of the motor.

28. (Original) A mobile object having a motor as a driving source, the mobile object comprising the power system in accordance claim 12 as a power source of the motor.

29. (Original) A mobile object having a motor as a driving source, the mobile object comprising the power system in accordance claim 14 as a power source of the motor.

30. (New) The power system in accordance with claim 1, the power system further comprising:

a predetermined material supply line that supplies the predetermined material to the chemical reaction module;

a first valve that opens and closes the predetermined material supply line;

a purge gas supply line that supplies a purge gas to the chemical reaction module;

a second valve that opens and closes the purge gas supply line;

a non-permeating gas supply line that supplies a non-permeating gas from the hydrogen separation module to a combustion unit;

a third valve that opens and closes the non-permeating gas supply line;

a fourth valve that opens and closes the hydrogen supply line;

an anode off gas supply line that supplies anode off gas from the fuels cells to the combustion unit; and

a fifth valve that opens and closes the anode off gas supply line, wherein

the stop control module activates and controls (1) a hydrogen no-purge mode to close the first valve, the second valve, the third valve, the fourth valve and the fifth valve, and (2) a hydrogen purge mode to close the first valve and to open the second valve, the third valve, the fourth valve, and the fifth valve.

31. (New) The power system in accordance with claim 8, wherein the temperature retention module comprises an electric heater.

32. (New) The power system in accordance with claim 8, wherein the temperature retention module comprises a combustor for combusting fuel.